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The USL/DBMS NASA/RECON Working Paper Series contains a collection of reports representing results of activities being conducted by the Computer Science Department of the University of Southwestern Louisiana pursuant to the specifications of National Aeronautics and Space Administration Contract Number NASW-3846. The work on this contract is being performed jointly by the University of Southwestern Louisiana and Southern University.

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USL/DBMS NASA/RECON

WORKING PAPER SERIES

STANDARDS

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USL/DBMS NASA/RECON

WORKING PAPER SERIES

STANDARDS

TABLE OF CONTENTS

I. INTRODUCTION

The purpose of this document is to establish a set of standards for authors as well as reviewers of the USL/DBMS NASA/RECON Working Paper Series to maintain a consistent format among such working papers.

Each manuscript is to be reviewed by two reviewers assigned by the editor, using the reviewer checklist as a guideline for evaluating various issues concerning the content and organization of the manuscript, thereby, insuring its completeness, consistency, and appropiateness. The authors are then provided feedback with as much comments and suggestions as possible in the comment sheet. This process of review, feedback and update will be iterated until the final version of the manuscript is accepted for the Working Paper Series.

II. PAPER OUTLINE

1. INTRODUCTION

The purpose of the paper outline is twofold: to initiate the research process so that authors can begin identifying relevant work to be used in support of each paper, and to motivate authors to make an initial attempt at formulating the content of each paper and the approach that will be taken to the presentation of the material.

2. OUTLINE FORMAT

Each paper outline should be submitted in the following format:

2.1 Cover Sheet

The cover sheet should identify the author name, and the paper name.

2.2 Table of Contents

The table of contents should be an outline of the section and subsection titles that will appear in the paper. An example

is given below:

1. INTRODUCTION

2. SECTION ONE TITLE

    2.1 Subsection One

    2.2 Subsection Two

3. SECTION TWO TITLE

4. SUMMARY

5. REFERENCES

6. APPENDICES

2.3 Detailed Table of Contents

For each section and subsection identified in Section 2.2, provide further details about the content of each section. Your outline should provide details about what will be presented and how it will be presented, possibly identifying examples, figures, and tables that you might use. In general, the detailed table of contents should describe the approach you intend to take in presentation of the paper. Appropriate references should be included within the outline and a list of all references should be included at the end of the outline.

2.4 List of References

A tentative list of references should be included within the

paper outline. This is a tentative list since you will probably add more references or decide not to use some of the initial references. Remember that the objective here is to initiate the research process.

All references should be listed alphabetically by the first author's last name. The reference identification is enclosed in square brackets. The brackets will contain the first author's last name followed by the year of the publication (last two digits of the year only). An example of a reference is given below:

[Ullman, 79]. J. D. Ullman, <u>Principles of Database Systems</u>, Computer Science Press, Washington, D. C., 1979.

Notice that the first line of a reference should appear against the left margin of the page. Subsequent lines should be indented 4 spaces.

If the same author has more than one publication in the same year, the year in the reference identification should be followed by "a", or "b", or "c", etc. For example:

[Ullman, 79a].

[Ullman, 79b].

Within the report, the reference identification should be used to

refer to the book or article. For example:

> A summary of the relational and the network models can
> be found in [Ullman, 79].

Multiple references on the same line should be separated by semicolons (example: [Ullman, 79a; Ullman, 79b]).

For more than one author of a publication, the reference should be listed as follows:

[Stonebraker, et.al, 76]. M. Stonebraker, E. Wong, and P. Kreps, "The Design and Implementation of Ingres," ACM Transactions on Database Systems, vol. 1, no. 3, Sept. 1976.

Also notice the difference between a book reference [Ullman, 79] and an article reference [Stonebraker, et.al, 76]. A book reference has the book name underlined and is followed by the publisher name, the city and state of the publisher, and the year the book was published. For article references, the title of the article is enclosed in quotes and the publication in which the article appeared is underlined. The publication name is followed by the volume, number, and month and year of the publication. All state and month names should be abbreviated.

III. ABSTRACT GUIDELINES

An abstract is an extremely compressed overview used separately from the paper as a locating device and an aid to potential readers who must determine if they need to read the paper. It varies in length from one hundred words to a maximum of two hundred and fifty words. However, since abstracts will be published or circulated separately from the paper or report as well as filed in indexes and information retrieval systems, they must be very compressed. In our Working Paper Series, abstracts should appear on a separate page between the title page and the table of contents page of the papers.

When writing an abstract, the author should keep in mind the following:

(1) The abstract is not a substitute for the introduction of the paper. It is a supplement which in no way should affect the basic three-component design of the paper.

(2) The abstract is not a miniature version of the introduction of the paper or the summary. Unlike the summary, it does not focus upon conclusions and recommendations; it is intended to help the reader to decide if he needs to read or obtain the paper. It does not convey sufficient information

to be instrumentally useful with the paper. Instead, it is intended to help readers to locate and screen potentially useful papers or reports.

For more details of the abstracting, the following guides will be useful:

Directions for Abstractors, published by the Chemical Abstracts Service; this is a standard guide for abstracting scientific research articles and reports.

Guidelines for Cataloguing and Abstracting, published by the Defense Documentation Center; this is the guide for abstracts to be stored in the federal government's centralized information retrieval systems, such as RECON.

IV. PAPER FORMAT

1. INTRODUCTION

Since our goal is to produce a series of working papers, it is important to establish standards in order to maintain a consistent format among the papers. The format described below establishes the standards that should be followed by all authors in the preparation of each paper. This document should also be used by all reviewers in order to insure a consistent format.

2. PAPER ORGANIZATION

Each paper will be organized into the following components:

(1) Heading.

(2) Sections.

     (a) INTRODUCTION Section.

     (b) Content Sections.

     (c) SUMMARY Section.

(3) References.

(4) Appendices

2.1 Heading

The heading should identify the title of the paper. It should be centered and all letters should be capitalized.

2.2 Sections

There are three types of sections within each paper: an introduction section, several content sections, and a summary section. All sections are preceeded by a section number and a section title. The section numbers are of the form X.1, X.2, X.3, ..., X.n, where "X" is the section number, and "n" is the subsection number. All letters in the section title should be capitalized. There should be two spaces between the section number and the first letter of the section title.

Only content sections can have subsections. Each subsection must be identified by a subsection number and a subsection title. All subsection numbers are of the form X.1.1, X.1.2, X.1.3, etc. Subsections can have sub-subsections if necessary, following the same numbering format. Subsection and sub-subsection titles should have only the first letter of all major words capitalized. There should be two spaces between the subsection number and the subsection title.

Both section and subsection numbers should be placed against the left-most margin of the page. Section titles should be

preceeded by three blank lines. The content of a section or subsection should begin one blank line below the section title. Subsection titles should be preceeded by two blank lines. Refer to Figure 1 for a sample paper format.

PERFORMANCE MEASUREMENT AND EVALUATION

1. INTRODUCTION

   The introduction goes here.

2. FIRST CONTENT SECTION

   A few lines here.

   2.1 Subsection One

   Subsection one goes here.

   2.2 Subsection Two

   Subsection two goes here.

3. SECOND CONTENT SECTION

   A few lines here.

4. SUMMARY

   Summary goes here.

FIGURE 1   Sample Chapter Format

2.2.1 INTRODUCTION Section

   Each paper must have an introduction that orients the reader
to the problems and issues to be addressed within the paper. The

introduction should be brief and should act as a "lead-in" to the remaining sections of the paper.

The word "INTRODUCTION" should be used as the introduction title.

2.2.2 Content Sections

Content Sections should contain the actual "meat" of the paper. Section titles should be short and should be named appropriately. If the title requires more than one line, the second line of the title should begin in the same column as the first character of the title on the previous line. An example is presented below:

2.2   THIS IS A VERY VERY VERY VERY VERY VERY
      LONG TITLE

Content sections can have subsections and subsections can have sub-subsections, etc. Subsections should be used only if the section can be broken down into two or more parts. For example, in the sample below:

2.1   THIS IS A SECTION

2.1.1 This is a Sub-section

This is the content of the subsection.

2.2 THIS IS THE NEXT SECTION

2.1.1 is an unnecessary subsection. If there is not a 2.1.2, then 2.1.1 should not be used.

Sections which have subsections can optionally have introduction paragraphs between the section title and the subsection title. For example, the subsections below begin immediately following the section title:

2.1 SECTION TITLE

2.1.1 Subsection Title

Subsection content goes here.

2.1.2 Subsection Title

Subsection content goes here.

In contrast, the section below has an introduction before the beginning of the first subsection:

2.1 SECTION TITLE

This section addresses methods of statistical analysis for evaluating .....

2.1.1 Method One

Method one content goes here.

2.1.2 Method Two

Method two content goes here.

Either approach described above is acceptable.

2.2.3 SUMMARY Section

Each paper must have a summary that recaps the important issues addressed within the paper. The word "SUMMARY" should be used as the summary section title.

2.3 Tables and Figures

All tables and figures should be placed at the first available location closest to the first time they are referenced. They should be numbered sequentially with tables and figures each having their own numbering sequence. All tables should have an identifying title line centered at the bottom of the table. The indentifying line should consist of the word "TABLE", the table

number, and the table title. An example is presented below:

```
        A    B    C    D    E
     ---------------------------
  1  |  . . . . . . . . . . . . . . . . . .
  2  |  . . . . . . . . . . . . . . . . . .
  3  |  . . . . . . . . . . . . . . . . . . .
  4  |  . . . . . . . . . . . . . . . . . .
```


TABLE 1   Table Title

Note that all letters in the word TABLE are capitalized. Only the first letters of major words in the table title are capitalized. There should also be two spaces between the table number and the table title, and two blank lines between the last line of the table and the table title.

When referencing a table, only the first letter of the word "Table" should be capitalized. For example:

         Notice in Table 1 that . . . .

All formats described above for tables also apply to figures.

2.4 References

Appropriate references should be made throughout the paper to all work used to support the content of the paper. A list of all references should appear at the end of the paper, following all tables and figures. The word "REFERENCES" should be centered at the top of the page. The first reference should appear two blank lines below the reference title.

All references should be listed alphabetically by the first author's last name. The reference identification is enclosed in square brackets. The brackets contain the first author's last name followed by the year of the publication (last two digits of the year only). An example of a reference is given below:

[Ullman, 79]. J. D. Ullman, *Principles of Database Systems*, Computer Science Press, Washington, D. C., 1979.

Notice that the first line of a reference should appear against the left margin of the page. Subsequent lines should be indented 4 spaces.

If the same author has more than one publication in the same year, the year in the reference identification should be followed by "a", or "b", or "c", etc. For example:

[Ullman, 79a].

[Ullman, 79b].

Within the chapter, the reference identification should be used
to refer to the book or article. For example:

A summary of the relational and the network models can
be found in [Ullman, 79].

Multiple references on the same line should be separated by
semicolons (example: [Ullman, 79a; Ullman, 79b]).

For more than one author of a publication, the reference
should be listed as follows:

[Stonebraker, et.al, 76]. M. Stonebraker, E. Wong, and P. Kreps,
    "The Design and Implementation of Ingres," ACM Transactions
    on Database Systems, vol. 1, no. 3, Sept. 1976.

Also notice the difference between a book reference [Ullman,
79] and an article reference [Stonebraker, et.al, 76]. A book
reference has the book name underlined and is followed by the
publisher name, the city and state of the publisher, and the year
the book was published. For article references, the title of the
article is enclosed in quotes and the publication in which the
article appeared is underlined. The publication name is followed
by the volume, number, and month and year of the publication.
All state and month names should be abbreviated.

3. INDENTATION, SPACING, AND PAGE NUMBERING

All paragraphs should be indented five spaces. All lines within a paragraph should be double spaced. There should be one blank line between each paragraph. The lines within a reference should be single spaced. There should be one blank line between each reference.

All pages should have a page number centered at the bottom of the page.

4. LISTINGS

To list a sequence of items, use the following format:

(1)   Two blanks lines should appear before the listing.

(2)   Two blank lines should appear after the listing.

(3)   Use numbers to identify each item in the listing.

(4)   Enclose numbers in parentheses.

(5)   The first character of each item listed should be capitalized.

(6)   Indent the entire listing five spaces.

(7)   To continue an item on a second line, the second line should be in line with the first character of the first line.

(8)   Each item should end with a period.

(9)   For items identified by a single digit number, leave three spaces between the right parenthesis and the first word of the item.

(10) For items identified by a two digit number, leave two spaces between the right parenthesis and the first word of the item.

5. PAPER STYLE

Since the objectives of this work is to produce tutorials as well as research reports, a different approach should be taken to writing the papers. Writing should be aimed at informing and teaching the intended audience as well as reporting research findings.   Included below are a few guidelines which might help in achieving these type of writing objectives.

(1)   Writing must be ACCURATE. Check for deficiencies in the coverage of a topic. Avoid misleading statements. Do not include those personal opinion without sufficient support from the results of simulation, formal or informal proofs.   Include sufficient examples, figures, and tables in order to clarify a subject.

(2)   Write clearly, concisely and in an organized manner. Avoid ambiguity, undue formalism and obscure notations and symbols. Define any symbols and all uncommon terminology before using in a discussion. Try not to make the subject harder than need be.

(3)   Set forth your assumptions about the reader's background. Make reasonable assumptions about the reader. Tell the reader what to expect, what material is included and what subjects are to be excluded. Perhaps the a more advanced reader may be advised to omit or briefly review certain introductory sections. Cover all topics as promised in the introduction. Recap paper highlights and discuss conclusions at the end of the paper.

(4)   Make the subject as interesting as possible while still being informative. Try to stimulate the reader (if possible) rather than put him to sleep.

(5)   Accurately reference literature cited. Include references to articles which may provide helpful tutorials or background material on a subject.

V. UNDERLINING

To underline words within a paragraph or to underline the title of a book or journal within a reference, do the following:

1.   Before the first character to be underlined, type "\016".

2.   After the last character to be underlined, type "\017".

3.   Use automatic underlining runoff instead of runoff.   For example, instead of typing:

          rf DBMS.NASA/RECON-X

     type

          aurf DBMS.NASA/RECON-X

Note that blank characters between "\016" and "\017" will not be underlined.

VI. AUTOMATIC NUMBERING OF TABLES AND FIGURES

Since all papers will be subject to change during the review process, it is important to avoid "hardcoding" things such as table and figure numbers into the paper if it can be avoided. As a result, all authors should follow the standards described below for automatically numbering all tables and figures.

1. At the beginning of each paper, initialize a figure counter and a table counter as follows:

    ```
    .sr fig_ctr 0
    .sr tab_ctr 0
    ```

    The ".sr" command is a runoff command that allows you to set the value of a variable.

2. Before assigning a number to a figure or a table, increment the appropriate counter as follows:

    ```
    .sr fig_ctr %fig_ctr%+1
    .ur %fig_ctr%
    ```

    The ".ur" command allows all variables surrounded by percent signs to be evaluated. The ".sr" command will then take the evaluated value, add 1 to the value, and store the result in fig_ctr.

3. Create a symbolic name to represent each figure and table within the paper. Use the names fig_1, fig_2, etc., and tab_1, tab_2, etc.

4. To automatically number each figure (or table), increment the counter (as described in part 2 above), and assign the counter value to the symbolic name using the ".sr" command as follows:

    .sr fig_1 %fig_ctr%

The symbolic name can then be referenced.

VII.   PAPER SUBMISSION POLICIES

1.   INTRODUCTION

In order to promote an efficient reviewing process and to ensure uniformity between papers, the following list of standards will comprise the submission policy and must be adhered to.

2.   STANDARDS

(1)   The Multics runoff/runout formatting facility is to be utilized for each version of the paper which is to be submitted for review.

(2)   Run the text segment through the MULTICS WORD LIST facility before submission. This will produce a list of all possibly misspelled words which can then be changed. The syntax for invoking the WORD LIST facility is:

```
ec >potluck>wl segment_name
```

(3)   Refer to Harbrace College Handbook for any problems with English grammar. One will be placed on reserve in Dupre Library for the use of all authors.

(4)   One copy of all work cited within the paper should be

submitted with the initial paper review. Book references are to be completely labeled in the upper left hand corner with the author names(s), book title, publisher, city of publication and year. Article references are to be labeled with the author name(s), article name, name of publication, volume and number, and month year of publication. Reference articles should be completely labeled in the upper left hand corner with same reference information which is to appear in the reference list. Refer to PAPER FORMAT standards.

(5)   Two copies of the paper are to be submitted on a full dprint (without removing margins).

(6)   The standard naming convention for paper segments stored on Multics will take the form:

DBMS.NASA/RECON-X.runoff

or

DBMS.NASA/RECON-X.archive

as appropiate, where X represents the paper number within the Working Paper Series.

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I N A S A I   REVIEW GUIDELINES   I 03/08/84 I
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VIII.   REVIEW GUIDELINES

1.   INTRODUCTION

The following notes are presented with the objective being to make the reviewing process a more effective and uniform effort. These guidelines are also intended to formally state the procedure which reviewers should follow. Included in these guidelines are reviewing hints, tasks to be performed and MULTICS pathnames for needed documents.

2.   REVIEW PHILOSOPHY

It is hoped that the review process will result in a fair and critical evaluation of all papers involved. The success of the review phase is essential in order that a quality product may result. Standards have been set and will be enforced with the idea that the individual papers must eventually stand side by side. Be_ conscientious and honest in your review work. Don't shy away from making suggestions, but remember to be tactful. Criticize the paper not the author. Review with a critical eye and an open mind. Let's see if we can respond to this task in a professional way.

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I S T A N D A R D S I   - 29 -   I WORKING PAPER SERIES I
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3. REVIEWING ENVIRONMENT ALGORITHM

(1)   Find a location with a peaceful atmosphere.

(2)   Allocate enough time to complete the reviewing task at one sitting.

(3)   Make all comments at the time of review.

4. FEEDBACK

Provide as much feedback as possible. If some aspect of the paper is inadequate or incorrect, give the reasons why it is so and perhaps some possible solutions. Feel free to mark the paper text with notes and additionally to make suggestions on the COMMENT sheet which is attached to the REVIEWER CHECKLIST.

5. STANDARDS

Use the REVIEWER CHECKLIST as a guide in evaluating various issues concerning manuscript content and organization. Refer to the PAPER FORMAT document as a standard for paper organization. YOU ARE DIRECTLY RESPONSIBLE FOR THE PAPER THAT YOU REVIEW.

6. REVIEW PROCEDURE

   (1)   Receive paper manuscript during class presentation.

   (2)   During the week that follows:

      (a)   Review paper.

      (b)   Complete REVIEWER CHECKLIST.

      (c)   Complete comment sheet.

   (3)   At next class return to the editors:

      (a)   Reviewed paper (Destination author).

      (b)   COMMENT SHEET (Destination author).

      (c)   Signed REVIEW CHECKLIST (Destination WDD).

7. DOCUMENTS

   The following documents will be available on MULTICS and may
be extracted from the directory

         >udd>DBMS>NASA/RECON>NASA.working_paper_series
with the segment name

         DBMS.NASA/RECON.STANDARD.archive

         in NASA.working_paper_series.archive

DOCUMENT

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(1)   INTRODUCTION

(2)   ABSTRACT GUIDELINES

(3)   PAPER OUTLINE

(4)   PAPER FORMAT

(5)   SUBMISSION POLICY

(6)   REVIEWER GUIDE

(7)   REVIEWER CHECKLIST

(8)   COMMENT SHEET

REVIEWER NAME_____   DATE RECEIVED_____

AUTHOR NAME_____   DEADLINE DATE_____

REPORT NUMBER_____   DATE COMPLETED_____

VERSION NUMBER_____

TITLE_____

_____

YES   SOME   NO   REMINDER

REVIEWER CHECKS:

[ ]   [ ]   [ ]   1: Were all references to other work read before
                        reviewing the paper??

[ ]   [ ]   [ ]   2: Was the paper THOROUGHLY reviewed??

[ ]   [ ]   [ ]   3: Was feedback provided to the author via notes
                        within the paper and attached comment sheet??

[ ]   [ ]   [ ]   4: Did you understand the material presented??

PAPER CHECKS:

[ ]   [ ]   [ ]   1: Were revisions made to the last version??
                        (if applicable)

[ ]   [ ]   [ ]   2: Was the English language properly used?

[ ]   [ ]   [ ]   3: Any misspelled words??

[ ]   [ ]   [ ]   4: Does the organization of the paper follow
                        paper format standards??

[ ]   [ ]   [ ]   5: Are references to outside literature correctly
                        cited??

[ ]   [ ]   [ ]   6: Is the reference list complete and accurate??

[ ] [ ] [ ]   7: Any obvious (or semi-obvious) plagiarism??

[ ] [ ] [ ]   8: Any technical inconsistencies between writing
                  and works cited??

[ ] [ ] [ ]   9: Any technical inconsistencies within paper??

[ ] [ ] [ ] 10: Are figures technically correct and adequately
                  referenced??(if no, go to comment)

[ ] [ ] [ ] 11: Are tables technically correct and accurately
                  referenced??(if no, go to comment)

[ ] [ ] [ ] 12: Were all references made available to you??

[ ] [ ] [ ] 13: Can reference list be improved??
                  (if yes, go to comments)

[ ] [ ] [ ] 14: Any missing details?? (if   yes,   go   to
                  comments)

[ ] [ ] [ ] 15: Any extra details?? (if yes, go to comments)

[ ] [ ] [ ] 16: Is paper interesting??
                  (if no, go to comments)

[ ] [ ] [ ] 17: Are paper objectives defined and met??
                  (if no, go to comments)

[ ] [ ] [ ] 18: Is an introduction included??

[ ] [ ] [ ] 19: Is the introduction adequate??
                  (if no, go to comments)

[ ] [ ] [ ] 20: Is a summary included?

[ ] [ ] [ ] 21: Is the summary adequate??
                  (if no, go to comments)

[ ] [ ] [ ] 22: Is the content of the paper clearly
                  presented?? (if no, go to comments)

[ ] [ ] [ ] 23: Is the abstract sufficiently brief to meet
                  specified length requirements??
                  (100 to 250 words)

[ ] [ ] [ ] 24: Does the abstract present information not contained in the paper rather than merely describe what is in the paper?? (if yes, go to comments)

[ ] [ ] [ ] 25: Does the abstract provide an overview of the paper (that is, does it explain the problem, method, result, conclusions, and recommendations)??
(if no, go to comments)

SIGNATURE OF REVIEWER:_____

REPORT AUTHOR:_____

REPORT NUMBER:_____

REPORT VERSION:_____

COMMENTS :

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7. Author(s) USL NASA PROJECT		8. Performing Organization Report No.
		10. Work Unit No.
9. Performing Organization Name and Address University of Southwestern Louisiana The Center for Advanced Computer Studies P.O. Box 44330 Lafayette, LA 70504-4330		11. Contract or Grant No. NGT-19-010-900
		13. Type of Report and Period Covered FINAL; 07/01/85 - 12/31/87
12. Sponsoring Agency Name and Address		14. Sponsoring Agency Code

15. Supplementary Notes

16. Abstract

The full set of standards for the development, formatting, reviewing, and issuance of entries within the USL/DBMS NASA/RECON Working Paper Series.

This report represents one of the 72 attachment reports to the University of Southwestern Louisiana's Final Report on NASA Grant NGT-19-010-900. Accordingly, appropriate care should be taken in using this report out of the context of the full Final Report.

17. Key Words (Suggested by Author(s)) Working Paper Series Standards, Reviewing Process, Information Storage and Retrieval Systems	18. Distribution Statement

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